Curriculum Vitae

Sergei S. Maslov

Contact:

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Personal :

Date of birth: January 10, 1969.
Place of Birth: Moscow, Russia.
Nationality: US citizen.
Languages: Russian - native; English - fluent;
French - reading, conversational.
Family status: Married, two sons.

Academic degrees:

- 5/96 **Ph. D. in Physics,**
  Physics Department, State University of New York
  at Stony Brook, NY USA.
  Doctoral Dissertation Thesis:
  Extremal Models of Evolution, Growth, and Depinning,
  Advisor: Dr. Per Bak .

- 6/92 **M.S. Degree in Physics and Applied Mathematics**
  (Summa Cum Laude),
  Department of General and Applied Physics,
  Moscow Institute of Physics and Technology,
  and Landau Institute for Theoretical Physics, Moscow, Russia.
  Thesis: *Tilted Vortex Lattice in Layered Superconductors*.
  Advisor: Prof. Valery Pokrovsky.

- 6/89 **B.S. Degree in Physics and Mathematics (Summa Cum Laude),**
  Department of General and Applied Physics,
  Moscow Institute of Physics and Technology,
  and Kapitza Institute for Physical Problems, Moscow, Russia.

Appointments:

- 9/11-present Scientist with tenure, Computational Biology Group Leader, Department of Biosciences, Brookhaven National Laboratory, NY, USA
- 10/04-9/11 Physicist with tenure, Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, NY, USA;
- 10/02-10/04 Physicist, Physics Department, Brookhaven National Laboratory, NY, USA;
- 10/00-10/02 Associate Physicist, Physics Department, Brookhaven National Laboratory, NY, USA;
- 10/98-10/00 Assistant Physicist, Physics Department, Brookhaven National Laboratory, NY, USA;
- 7/96-10/98 Postdoctoral Research Associate, Physics Department, Brookhaven National Laboratory, NY, USA;
- 1/95-6/96 Teaching Assistant, Department of Physics and Astronomy, SUNY at Stony Brook, NY, USA;
- 9/92-1/95 Research Assistant, Brookhaven National Laboratory, NY, USA;
- 9/92- 6/95 Junior Research Associate, Landau Institute for Theoretical Physics, Moscow, Russia.

Visiting and adjunct appointments:

- 9/11-present Assistant Chief Science Officer, DOE Systems Biology Knowledgebase, kbase.us
- 9/08-present Affiliated Faculty Member and Executive Committee, Laufer Center for Physical and Quantitative Biology, SUNY at Stony Brook, NY, USA;
- 6/04-present Adjunct Professor, Physics Department, SUNY at Stony Brook, NY, USA;
- 4/03-6/07 Consultant, Ariadne Genomics Inc., Rockville, MD, USA;
- 12/98-12/02 Consultant, NEC Research Institute, Princeton, NJ, USA;
- 1-2/11 Visiting Scientist, KITP, UC at Santa Barbara, CA, USA;
- 6/07 Lecturer, EPFL, Lausanne, Switzerland
- 5/07 Visiting professor, LPTHE, U. of Paris 7, France
- 1-4/07 Visiting Scientist, KITP, UC at Santa Barbara, CA, USA
- 1-2/03 Visiting Scientist, KITP, UC at Santa Barbara, CA, USA;

- 10/01-1/02 Visiting Associate Professor, University of Tokyo, Japan;
- 4/01-6/01 Visiting Scientist, KITP, UC at Santa Barbara, CA, USA;
- 11/00-2/01 Visiting Research Professor, University of Fribourg, Switzerland;
- 6/94-8/00 Summer Visiting Scientist, University of Fribourg, Switzerland;
- 10/93 Visiting Scientist, Weizmann Institute of Science, Rehovot, Israel;
- 12/91-2/92 Visiting Scientist, Brookhaven National Laboratory, Upton, NY, USA.

Editorial boards and review panels:

- 1/13-present Associate Editor, IEEE/ACM Transactions on Computational Biology and Bioinformatics
- 3/10 Invited participant and panelist in the Long Term Vision Workshop by the U.S. Department of Energy, Office of BER, Washington DC
- 10/05-present Editorial board of Biology Direct: http://www.biology-direct.com
- 6/05 Reviewer in the NIH Panel for Technology Centers for Networks and Pathways

Honors and awards:

- 5/04 Presidential Early Career Award for Scientists and Engineers (PECASE), White House, Washington DC;
- 11/92 T. A. Pond Award for the best results in comprehensive exams, Physics Department, SUNY at Stony Brook;
- 6/92 Diploma of graduation with Distinction (Summa Cum Laude), Moscow Institute of Physics and Technology;
- 9/87-6/91 Fellowship for outstanding undergraduate students, Moscow Institute of Physics and Technology

Internal panels and committees:

- 9/04-present Member of the BNL committee for organizing laboratory-wide distinguished lectures
- 9/09-9/12 Member of the BNL council considering tenure appointments

Research support:

Ongoing Research Support:

- Title: Genomic Science Focus Area (SFA): Systems Biology Knowledgebase
  Funding organization: DOE, Office of Biological and Environmental Research
  Dates of project: 08/15/2012 - 08/14/2017
  Annual funding: $12M
  Level of effort: 64%
  Role: one of three co-PIs, Assistant Chief Science Officer,
  leader of the group including Cold Spring Harbor Laboratory and
  Yale University, scientific leader of the networks cross-cutting area.

- Title: Tools and Models for Integrating Multiple Cellular Networks
  Funding organization: DOE, Office of Biological and Environmental Research
  Dates of project: 07/15/2010 - 09/30/2013
  Annual funding: $175.1K
  Level of effort: 10%
  Role: co-PI

- Title: Linkage between DOE Systems Biology Knowledgebase & Protein Data Bank
  Funding organization: DOE, Office of Biological and Environmental Research
  Dates of project: 8/15/2013 - 08/14/2014
  Annual funding: $200K
  Level of effort: 15%
  Role: PI

- Title: Tissue-specific metabolic models in plants
  Funding organization: BNL, Laboratory Directed Research & Development
  Dates of project: 10/01/2013 - 09/30/2016 (pending)
  Annual funding: $350K
  Level of effort: 10%
  Role: co-PI with Jorg Schwender (BNL)

- Title: Identifying the mechanisms that control whole-plant
  nitrogen allocation: A prerequisite for bioenergy crops that thrive on marginal lands
  Funding organization: BNL, Laboratory Directed Research & Development
  Dates of project: 10/01/2013 - 09/30/2016 (pending)
  Annual funding: $350K
  Level of effort: 10%
  Role: co-PI with Ben Babst (BNL)

Completed Research Support:

- Title: Theoretical research in statistical physics focused on understanding the evolution, statistical properties and dynamics of complex systems and their underlying networks.
  Funding organization: DOE, Office of Basic Energy Sciences
  Dates of project: 10/01/1998-09/30/2011
  Annual funding: $1.45M
  Level of effort: 64%
  Role: co-PI

- Title: Complex Networks Approach to Power Grid Design and Stability
  Funding organization: BNL, Laboratory Directed Research & Development
  Dates of project: 10/01/2010 - 09/30/2011
  Annual funding: $200K
  Level of effort: 10%
  Role: PI

- Title: Presidential Early Career Award for Scientists and Engineers (PECASE)
  for "Dr. Maslov's contributions to physics of complex systems"
  Funding organization: DOE, Office of Basic Energy Sciences
  Dates of project: 10/01/2008 - 09/30/2011
  Role: PI

- Title: Systemic analysis of molecular networks
  Funding organization: NIH/NIGMS, 1 R01 GM068954-01
  Dates of project: 6/15/2003-5/31/2007
  Role: co-PI

- Title: Self-Organized Nanoparticles for Probing Charge Transfer
  at Metallic/Organic Interfaces.
  Funding organization: BNL, Laboratory Directed Research & Development
  Dates of project: 10/01/2001-9/30/2004
  Role: co-PI

Conferences organized:

- 6/13 International workshop "Quantitative Laws of Genome Evolution",
  Villa del Grumello, Como, Italy, co-organized with
  M. C. Lagomarsino and others, www.complexcomolake.it/quantitativelaws

- 9/10 International workshop "Quantitative biology: from complex networks
  to simple models", www.bnl.gov/qbio, Montauk Yacht Club, Montauk, NY

- 9/05 International workshop "Complex biomolecular networks:
  structure, evolution, and function"
  http://www.cmth.bnl.gov/workshop/BioNetworks05
  Montauk Yacht Club, Montauk, NY

- 6/03 International workshop "Complex Networks in Biology from Molecules to
  Neurons", co-organized with D. Chklovskii, Aspen Center for Physics, CO

- 8/03 Workshop "Field Theory Methods in Correlated Nanoscale Systems"
  (co-organized with A. Tsvelik and F. Essler)
  Brookhaven National Laboratory, Upton, NY

Invited conference talks, seminars, and colloquia:

- 9/13 Department colloquium, McMaster University, Hamilton, ON, Canada
- 9/13 Department colloquium, Emory University, Atlanta GA
- 6/13 Two invited talks at the international conference "Quantitative Laws of Genome Evolution", Villa del Grumello, Como, Italy
- 6/13 Invited talk at "NetSciReg'13 - Network Models in Cellular Regulation", Copenhagen, Denmark
- 5/13 Invited seminar at the Center for Models of Life, NBI, Copenhagen, Denmark
- 5/13 Invited talk at the international workshop "Statistical Mechanics of Biological Cooperativity", Mariehamn, Åland Islands, Finland
- 8/12 Invited talk, public lecture, and TV interview at the workshop "Evolutionary Dynamics and Information Hierarchies in Biological Systems", Aspen Physics Institute, Aspen, CO
- 7/12 Invited talk at the 2012 Annual Research Meeting of the DOE Office of Science Fellowship Program, BNL
- 7/12 Invited talk at the conference "Networks in Biology, Social Sciences and Engineering", Bangalore, India
- 3/12 Invited seminar at the Institute of Bioinformatics, University of Georgia, Athens GA
- 7/11 Invited talk at the MCCMB 11, Moscow, Russia
- 3/11 Invited seminar at the Stony Brook University/Cold Spring Harbor Laboratory/BNL seminar series on Evolutionary Functional Genomics, Stony Brook, NY
- 3/11 Invited talk and chair of a symposium on contributions of networks theory to biology, Biophysical Society 55th Annual Meeting, Baltimore, MD
- 2/11 Chairman of the session, Gordon Research Conference, "Stochastic Physics in Biology", Ventura, CA
- 2/11 Invited talk at the KITP workshop "Microbial and Viral Evolution", UC Santa Barbara, CA
- 11/10 Invited talk at the international meeting on Integrative Post-Genomics, IPG'10, Lyon, France
- 11/10 Invited seminar at the Laboratory of Analytical Genetics, Universite Pierre et Marie Curie, Paris, France
- 11/10 Invited guest lecture at the joint MIT/Harvard graduate course on Quantitative Genomics, Cambridge, MA

- 11/10 Invited talk at the Santa Fe Institute's Annual Business Network and Board of Trustees' Symposium , "Complexity of Regulation", Santa Fe, NM
- 11/10 Invited seminar for the bioinformatics group, New York University, NY
- 10/10 Invited seminar at the National Center for Biotechnology Information, NIH campus, Bethesda, MD
- 9/10 Invited talk at the international workshop , "Quantitative biology: from complex networks to simple models", Montauk, NY
- 7/10 Invited participant and panelist in the DOE Systems Biology Knowledgebase Development Workshop, Arlington, VA
- 6/10 Invited seminar at the MRC Laboratory of Molecular Biology, University of Cambridge, UK
- 6/10 Invited talk at the international meeting "Modeling Complex Systems", University of Manchester, UK
- 5/10 Physics Department Colloquium, University of Rhode Island, RI
- 3/10 Invited participant and panelist in the Long Term Vision Workshop by the U.S. Department of Energy, Office of Biological and Environmental Research, Gaithersburg, MD
- 3/10 Invited seminar at the Karolinska Institute, Stockholm, Sweden
- 2/10 Colloquium at the Santa Fe Institute, New Mexico
- 1/10 Invited participant in the "Application of High Performance Computing to the DOE Joint Genomic Institute's Data Challenges", JGI, Walnut Creek, CA
- 11/09 Invited seminar for the soft condensed matter and biophysics group, New York University, NY
- 9/09 Invited seminar at the Medical School, University of North Carolina, Chapel Hill, NC
- 8/09 Invited seminar at the Department of Biochemistry, University of Montreal, Canada
- 7/09 Two invited talks at the MCCMB 09, Moscow, Russia
- 7/09 Invited seminar at the TU Munchen, Institut fur Genomorientierte Bioinformatik, Munich, Germany
- 6/09 Invited talk at the international conference "From biological networks to cellular function", ICTP, Trieste, Italy
- 5/09 Invited blackboard seminar, Department of Systems Biology, Harvard Medical School, Boston, MA
- 3/09 Invited talk at the APS March meeting, Pittsburgh, PA

- 12/08 Invited seminar at Cold Spring Harbor Laboratory, NY
- 9/08 Seminar at the seminar series for Laufer Center for Computational Biology/Genomics, SUNY Stony Brook
- 8/08 Talk at the Aspen Center for Physics summer program: "Evolution: From Atoms to Organisms"
- 6/08 Invited talk at the 2008 Whitney Symposium "Networks", General Electric Global Research, Niskayuna, NY
- 2/08 Colloquium, "Ranking of scientific publications", American Physical Society editorial offices, Ridge, NY
- 1/08 Talk at the Aspen Center for Physics winter conference, "Decision Making in Single Cells"
- 10/07 Invited talk at the international conference "Computational philosophy: lessons from simple models", Niels Bohr Institute, Copenhagen, Denmark
- 6/07 Course of four invited lectures at the Troisieme cycle en Suisse Romande, EPFL, Lausanne, Switzerland
- 6/07 Seminar at the U. of Geneva, Switzerland
- 6/07 Seminar at the U. of Fribourg, Switzerland
- 5/07 Invited talk at the NetSci2007 International Conference and Workshop, New York City Hall of Science
- 5/07 Educational tutorial at the NetSci2007 International Conference and Workshop, New York City Hall of Science
- 5/07 Seminar at the University of Cologne, Germany
- 5/07 Seminar at the Niels Bohr Institute, Copenhagen, Denmark
- 5/07 Seminar at the Curie Institute, Paris, France
- 5/07 Seminar at the Ta Ma Ra's lab, Necker Medical School, Paris, France
- 3/07 Invited review talk at the program "Evolution of Molecular Networks", KITP, UC Santa Barbara.
- 3/07 Seminar at the QB3,UC San Francisco
- 1/07 Seminar at the Cold Spring Harbor Laboratory
- 12/06 Invited talk at the Pan-American Advanced Study Institute "From disordered systems to complex systems", mar del Plata, Argentina
- 8/06 Seminar at the Dept. of Ecology and Evolution, SUNY at Stony Brook

- 8/06 Seminar at the Dept. of Pharmacology, SUNY at Stony Brook
- 5/06 Invited talk at the International Workshop on the Internet Topology (WIT), UC San Diego, CA
- 5/06 Seminar at the Center for Theoretical Biological Physics (CTBP), Dept. of Physics, UC San Diego, CA
- 3/06 Seminar, at the Dept. of Physics, University of Fribourg, Switzerland
- 11/05 Physics Department colloquium, SUNY at Stony Brook, NY
- 8/05 Invited talk at the international Workshop "Physics of Life From Single Molecules to Networks", Krogerup, Denmark.
- 7/05 Seminar, Santa Fe Institute, Santa Fe, NM
- 5/05 Invited talk at the ICTP workshop on Structure and Function of Complex Networks, ICTP, Trieste, Italy
- 4/05 Invited lecture at the winter school "Dynamics of Complex Interconnected Systems: Networks and Bioprocesses", Geilo, Norway
- 3/05 Seminar,, Santa Fe Institute Santa Fe, NM
- 3/05 Seminar, Physics Department, University of New Mexico, Albuquerque, NM
- 11/04 Invited talk at the New York Academy of Science, New York, NY
- 7/04 Seminar, Department of Biology, Brookhaven National Laboratory, Upton, NY
- 4/04 Physics Department Colloquium, NYU, New York, NY
- 4/04 Seminar, Center for Computational Biology and Bioinformatics, Columbia University, New York, NY.
- 4/04 Seminar, Medical Department, Brookhaven National Laboratory, Upton, NY
- 3/04 Seminar, Biozentrum, Basel, Switzerland
- 3/04 Seminar, Dept. of Physics, EPFL, Lausanne, Switzerland
- 3/04 Seminar, Dept. of Physics, Fribourg University, Switzerland
- 2/04 Gordon Research Conference "Structural Functional and Evolutionary Genomics", Ventura, CA, invited speaker.
- 11/03 International conference "In-silico biological networks: from genomics to epidemiology", Atlanta, GA, invited plenary speaker.
- 10/03 Seminar, Biocomplexity Institute, Indiana University, Bloomington, IN
- 8/03 Niels Bohr Summer Institute "Complexity and Criticality", Copenhagen, Denmark, invited speaker.

- 6/03 Conference "Modeling of protein interactions in genomes", SUNY at Stony Brook, NY, invited speaker.
- 6/03 International Workshop: "Complex Networks in Biology: from Molecules to Neurons", Aspen Center for Physics, Aspen, CO. co-organizer and speaker.
- 10/02 Seminar, Center for Physics and Biology, Rockefeller University, New York, NY
- 8/02 International Workshop "Dynamics of Biological Systems: From Molecules to Networks", Krogerup, Denmark.
- 8/02 Seminar, Department of Biology, Brookhaven National Laboratory, Upton, NY
- 3/02 International Workshop: "Concepts for Complex Adaptive Systems", Hanse Institute for Advanced Studies, Delmenhorst, Germany
- 12/01 Seminar, Physics Department, University of Lausanne, Switzerland
- 11/01 Series of lectures, Graduate School of Frontier Sciences, University of Tokyo, Japan
- 11/01 Yukawa Institute International Workshop "Order, Disorder and Dynamics in Quantum Spin Systems", Yukawa Institute, Kyoto, Japan
- 7/01 International Conference on Dynamical Networks in Complex Systems, Kiel, Germany
- 2/01 Seminar, Institute of Physics, Prague, Czech Republic
- 2/01 NATO Advanced Research Workshop: "Application of Physics in Economic Modeling", Prague, Czech Republic
- 1/01 Seminar, Physics Department, University of Lausanne, Switzerland
- 12/00 Seminar, Institute of Theoretical Physics, Fribourg, Switzerland
- 6/00 International Workshop "Integrable models in Condensed Matter and Non-Equilibrium Physics", Centre de Rechereches Mathematiques, Universite de Montreal, Canada,
- 1/00 Physics department colloquium, University of California at San Diego, San Diego, CA

Refereeing:

Served as a reviewer for DOE, NSF, and NIH proposals, as well as Cambridge U. Press books

Journals (during the last two years): Science, Nature, PNAS, Nature Physics, PLoS Biology, PLoS Comp. Biology, Molecular Systems Biology, Genome Research, BMC Systems Biology, Bioinformatics, Molecular Biology and Evolution, Biology Direct, Phys. Rev. Lett., Phys. Rev. E, New J. of Physics, Physica A, J. Stat. Mech.

Publications:

Total >3000 citations, h-index: 28, Average citation per article >46.

1. Dixit PD, Pang TY, Studier FW, **Maslov S** [corresponding author] (2013) Quantifying contributions of mutations and homologous recombination to E. coli genomic diversity, (submitted)

2. Taghavi S Wu X, Ouyang L, Zhang YB, Stadler A, McCorkle S, Zhu W, **Maslov S**, van der Lelie D (2013) Transcriptional responses to sucrose mimic the plant-associated life style of the plant growth promoting endophyte Enterobacter sp. 638, PLoS One (submitted).

3. **Maslov S**, Sneppen K, Well-temperate phage, PNAS (submitted), arXiv:1308.1646.

4. Pang TY, **Maslov S** [corresponding author] (2013) Universal distribution of component frequencies in biological and technological systems. PNAS 110:6235–6239. arXiv:1308.2145
   Featured in an interview at the **NPR Marketplace Tech Report**, ScienceNews daily, Phys.org, Gizmodo, "Skeptically Speaking" radio show and podcast, BNL, Stony Brook U, and KBase press releases, gazeta.ru, polit.ru, etc.

5. Dixit PD, **Maslov S** [corresponding author] (2013) Evolutionary capacitance and control of protein stability in protein-protein interaction networks. PLoS Comput Biol 9:e1003023.

6. Grilli J, Bassetti B, **Maslov S**, Cosentino Lagomarsino M (2012) Joint scaling laws in functional and evolutionary categories in prokaryotic genomes. Nucl. Acids Res. 40(2):530-40. arXiv:1101.5814.

7. Pang TY, **Maslov S**, (2011) Toolbox model of evolution of metabolic pathways on networks of arbitrary topology. PLoS Comp Bio 8, e1001137; arXiv:1009.4478

8. Heo M, **Maslov S**, Shakhnovich E (2011) Topology of protein interaction network shapes protein abundances and strengths of their functional and nonspecific interactions. Proceedings of the National Academy of Sciences 108:4258-4263

9. Studier FW, Daegelen P, Lenski RE, **Maslov S**, Kim JF (2009) Understanding the Differences between Genome Sequences of Escherichia coli B Strains REL606 and BL21(DE3) and Comparison of the E-coli B and K-12 Genomes, Journal of Molecular Biology 394: 653-680

10. **Maslov S**, Krishna S, Pang TY, Sneppen K (2009) Toolbox model of evolution of prokaryotic metabolic networks and their regulation. Proceedings of the National Academy of Sciences of the United States of America 106: 9743-9748. arXiv:1009.4474.

11. **Maslov, S** (2009) Power laws in chess, Physics 2: 97 (News and Views) DOI: 10.1103/Physics.2.97

12. **Maslov S**, Redner S (2008) Promise and pitfalls of extending Google's PageRank algorithm to citation networks. J Neurosci 28: 11103-5

13. Yan KK, Walker D, **Maslov S** (2008) Fluctuations in Mass-Action Equilibrium of Protein Binding Networks. Physical Review Letters 101: 268102; arXiv:0803.1471.

14. Constraints imposed by non-functional protein-protein interactions on gene expression and proteome size, J. Zhang, S. Maslov, and E. I. Shakhnovich, Molecular Systems Biology 4:210 (2008). arXiv:1007.2668.

15. Prediction of indirect protein regulations and their signs in densely interconnected networks, K-K. Yan, S. Maslov, I. Mazo, A. Yuryev arXiv:0710.0892.

16. Algorithmic basis for pathway visualization, S. Simakov, I. Ispolatov, S. Maslov, and A. Nikitin, an invited book chapter in the "Pathway Analysis for drug discovery", edited by A. Yuryev, Wiley, New York (2008).

17. Propagation of concentration perturbations in equilibrium protein binding networks, S Maslov, I. Ispolatov, an invited book chapter in the "Pathway Analysis for drug discovery", edited by A. Yuryev, Wiley, New York (2008).

18. Detection of the dominant direction of information flow in densely interconnected regulatory networks, I. Ispolatov, S. Maslov, BMC Bioinformatics, 9:424 (2008). arXiv:q-bio/0702057.

19. Topological and dynamical properties of protein interaction networks, S. Maslov, an invited book chapter in the " Protein-protein interactions and networks: Identification, Analysis and Prediction", A. R. Panchenko and T. M. Przytycka (eds.), Springer-Verlag, New York (2008).

20. Spreading out of perturbations in reversible reaction networks, S. Maslov, K. Sneppen, I. Ispolatov, New Journal of Physics 9: 273 (11 pages) (2007). arXiv:q-bio/0611026.

21. Propagation of large concentration changes in reversible protein binding networks, S Maslov, I. Ispolatov, Proc Natl Acad Sci U S A 104:13655-13660 (2007). arXiv:0708.2421.

22. Complex networks - Role model for modules., S. Maslov, Nature Physics 3: 18-19 (2007).

23. Optimal ranking in networks with community structure, H. Xie, K.-K. Yan, and S. Maslov, Physica A 373: 831-836 (2007). arXiv:physics/0510107.

24. Finding Scientific Gems with Google, P. Chen, H. Xie, S. Maslov, S. Redner, Journal of Informetrics 1: 8-15 (2007). arXiv:physics/0604130.

25. Exploring an opinion network for taste prediction: An empirical study. M. Blattner, Y.C. Zhang, S. Maslov, Physica A 373: 753-758 (2007); arXiv:physics/0610283.

26. Ranking scientific publications using a model of network traffic. D. Walker, H. Xie, K.-K Yan, S. Maslov, J. Stat. Mech. 6:P06010 (2007); arXiv:physics/0612122.

27. Prediction of Protein-protein Interactions on the Basis of Evolutionary Conservation of Protein Functions, E. Kotelnikova, A. Kalinin, A. Yuryev, and S. Maslov, Evolutionary Bioinformatics 3 197-206 (2007).

28. Parameters of the proteome evolution from the distribution of sequence identities of paralogous proteins, J. Bock Axelsen, K.-K. Yan, and S. Maslov, Biology Direct 2:32,(2007) arXiv:q-bio/0507032.

29. UV-induced mutagenesis in Escherichia coli SOS response: A quantitative model, S. Krishna, S. Maslov , and K. Sneppen, PLoS Comp Biol. 3, e41 (12 pages) (2007); arXiv:q-bio/0701013.

30. Automatic Curation and Pathway Building in Biological Association Networks, A. Yuryev, Z. Mulyukov, E. Kotelnikova, S. Maslov, S. Egorov, A. Nikitin, N. Daraselia, I. Mazo, BMC Bioinformatics, 7,171-195 (2006).

31. Binding properties and evolution of homodimers in protein-protein interaction networks, I. Ispolatov, A. Yuryev, I. Mazo, S. Maslov, Nucleic Acids Research, 33, 3629-3635 (2005). arXiv:q-bio/0501004.

32. Computational architecture of the yeast regulatory network, S. Maslov, K. Sneppen, Phys. Biol. 2, S94-S100 (2005)

33. Effects of community structure on search and ranking in information network, H. Xie, K.-K. Yan, and S. Maslov, proceedings of the winter school "Dynamics of Complex Interconnected Systems: Networks and Bioprocesses, Geilo 2005" published by Kluwer Academic Publishers, Dordrecht (2006). arXiv:cond-mat/0409087.

34. Hierarchy Measures in Complex Networks, A. Trusina S. Maslov, P. Minnhagen, and K. Sneppen, Phys. Rev. Lett. 92, 17870 (2004). arXiv:cond-mat/0308339.

35. Large-scale topological properties of molecular networks, S. Maslov, K. Sneppen, an invited book chapter in the "Power Laws, Scale-free Networks and Genome Biology", Eugene Koonin, Yuri Wolf and Georgy Karev (eds.), Landes Biosciences, Georgetown, Texas (2005).

36. Detection of topological patterns in protein networks, S. Maslov, K. Sneppen, an invited book chapter in the "Genetic Engineering, Principles and Methods", vol. 26 Jane K. Setlow (ed.), Kluwer Academic/ Plenum Publishers, Dordrecht, The Netherlands (2004).

37. Upstream Plasticity and Downstream Robustness in Evolution of Molecular Networks, S. Maslov, K. Sneppen, and K. Eriksen, BMC Evolutionary Biology, 4:9, pp. 1-12 (2004). arXiv:q-bio/0310028.

38. Diffusion on complex networks: a way to probe their large-scale topological structures,

I. Simonsen, K. Eriksen, S. Maslov, K. Sneppen,
Physica A 336, 163-173 (2004).
arXiv:cond-mat/0312476.

39. Modularity and Extreme Edges of the Internet,
K. Eriksen, I. Simonsen, S. Maslov, K. Sneppen,
Phys. Rev. Lett. 90, 148701, pp.1-4 (2003).
arXiv:cond-mat/0212001.

40. Detection of Topological Patterns in Complex Networks:
Correlation Profile of the Internet, S. Maslov,
K. Sneppen and A. Zaliznyak, Physica A 333,
529-540 (2004). arXiv:cond-mat/0205379.

41. The conundrum of stock versus bond prices, S. Maslov,
B. M. Roehner, Physica A 335, 164-182 (2004).
arXiv:cond-mat/0311307.

42. Does the Price Multiplier Effect Also Holds for Stocks?
S. Maslov, B. M. Roehner, International Journal of
Modern Physics C,14, issue 10.(2003). arXiv:cond-mat/0311306.

43. Correlation Profiles and Circuit Motifs in Complex Networks,
S. Maslov, K. Sneppen, and U. Alon, an invited book chapter in
the "Handbook of Graphs and Networks",
S. Bornholdt, and H.-G. Schuster, (eds.),
Wiley-VCH, Weinheim, (2003).

44. Protein interaction networks beyond artifacts,
S. Maslov, and K. Sneppen, FEBS Letters 530, 255-256 (2002).

45. Specificity and stability in topology of protein networks,
S. Maslov and K. Sneppen, Science, 296, 910-913 (2002)
arXiv:cond-mat/0205380.

46. Extracting Hidden Information from Knowledge Networks,
S. Maslov and Y-C. Zhang, Phys. Rev. Lett. 87,
article number 248701 (4 pages) (2001).
arXiv:cond-mat/0104121.

47. Measures of globalization based on cross-correlations
of world financial indices, S. Maslov,
Physica A 301, 397-406 (2001).
arXiv:cond-mat/0103397.

48. Price fluctuations from the order book perspective - empirical
facts and a simple model, S. Maslov, and M. Mills,
Physica A 299, 234-246 (2001).
arXiv:cond-mat/0102518.

49. Quantum and classical dynamics in mixed-spin
one-dimensional antiferromagnets,

A. Zheludev, S. Maslov, T. Yokoo, J. Akimitsu,
S. Raymond, S. E. Nagler, J. Phys.: Condens. Matter
13, R525-R536 (2001). arXiv:cond-mat/0006350.

50. Exact solution of a stochastic directed sandpile model,
M. Kloster, S. Maslov, and C. Tang, Phys. Rev. E 63, article number
026111 (4 pages) (2001). arXiv:cond-mat/0005528.

51. Energy Separation of Single-Particle and Continuum States in an
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